



ISSUE 2; July 2014 - RoHS 2011/65/EU

#### Description

- LVPECL output using PLL technology to give a very wide frequency range  
Ceramic package with a seam sealed metal lid, hermetically sealed  
For a very low jitter version of this package please see our IQXO-620

#### Frequency Parameters

- Frequency 160.0MHz to 622.08MHz
- Frequency Stability  $\pm 25.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing  $\pm 3\text{ppm}$  max per year @  $25^\circ\text{C}$

#### Electrical Parameters

- Supply Voltage  $3.3\text{V} \pm 5\%$

#### Operating Temperature Ranges

- $-10$  to  $70^\circ\text{C}$
- $-40$  to  $85^\circ\text{C}$

#### Output Details

- Output Compatibility LVPECL
- Drive Capability  $50\Omega$  terminated to  $V_S - 2.0\text{V}$
- Logic '1' to pad 1 ( $\geq 70\%V_S$ ) disables oscillator outputs; oscillator outputs go to the high impedance state  
Logic '0' to pad 1 ( $\leq 30\%V_S$ ) enables oscillator outputs  
No connection to pad 1 enables oscillator outputs

#### Noise Parameters

- Phase Jitter (12kHz to 20MHz): 5ps max (note: 1ps max available on specific frequencies please contact our sales offices for details)

#### Environmental Parameters

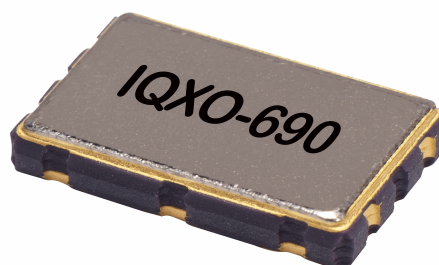
- Shock: MIL-STD-202, Method 213, Condition E
- Vibration: MIL-STD-883, Method 2007, Condition A
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$

#### Ordering Information

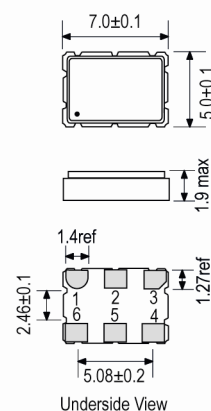
- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage
- Example:  
200.0MHz IQXO-690  
LVPECL  $\pm 50\text{ppm}$   $-10$  to  $70^\circ\text{C}$   $3.3\text{V}$

#### Compliance

- RoHS Status Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



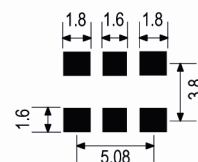
#### Outline (mm)



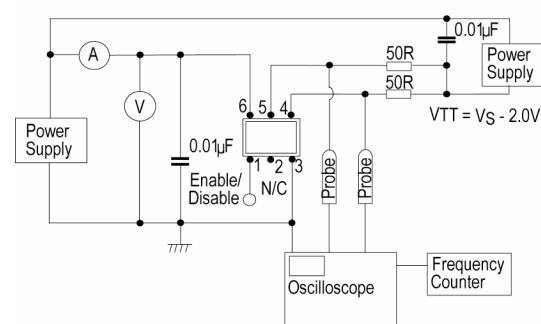
Pad Connections  
 1. Tri-state Operation  
 2. N/C  
 3. GND  
 4. Output 1  
 5. Output 2  
 6.  $+V_S$

Note: a  $0.01\mu\text{F}$  or  $0.1\mu\text{F}$  decoupling capacitor is recommended between GND and  $+V_S$

#### Solder Pad Layout



#### Test Circuit



#### Sales Office Contact Details:

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 USA: +1 408.273.4530

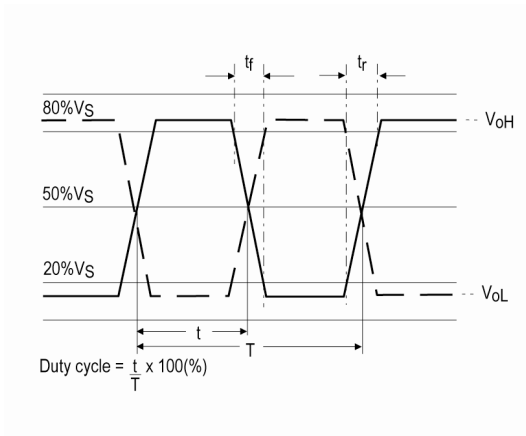
Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
 Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)



#### Packaging Details

- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 100
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000

#### Wave Form



#### Electrical Specification - maximum limiting values 3.3V ±5%

| Frequency<br>Min | Frequency<br>Max | Temperature Range | Stability<br>(min) | Current<br>Draw | Rise and Fall<br>Time | Duty Cycle |
|------------------|------------------|-------------------|--------------------|-----------------|-----------------------|------------|
|                  |                  | °C                | ppm                | mA              | ns                    | %          |
| 160.0MHz         | 622.08MHz        | -40 to 85         | ±25.0              | 135             | 0.7                   | 45/55      |
|                  |                  | -10 to 70         | ±25.0              | 135             | 0.7                   | 45/55      |

*This document was correct at the time of printing; please contact your local sales office for the latest version.*

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